

FIG. 1 100

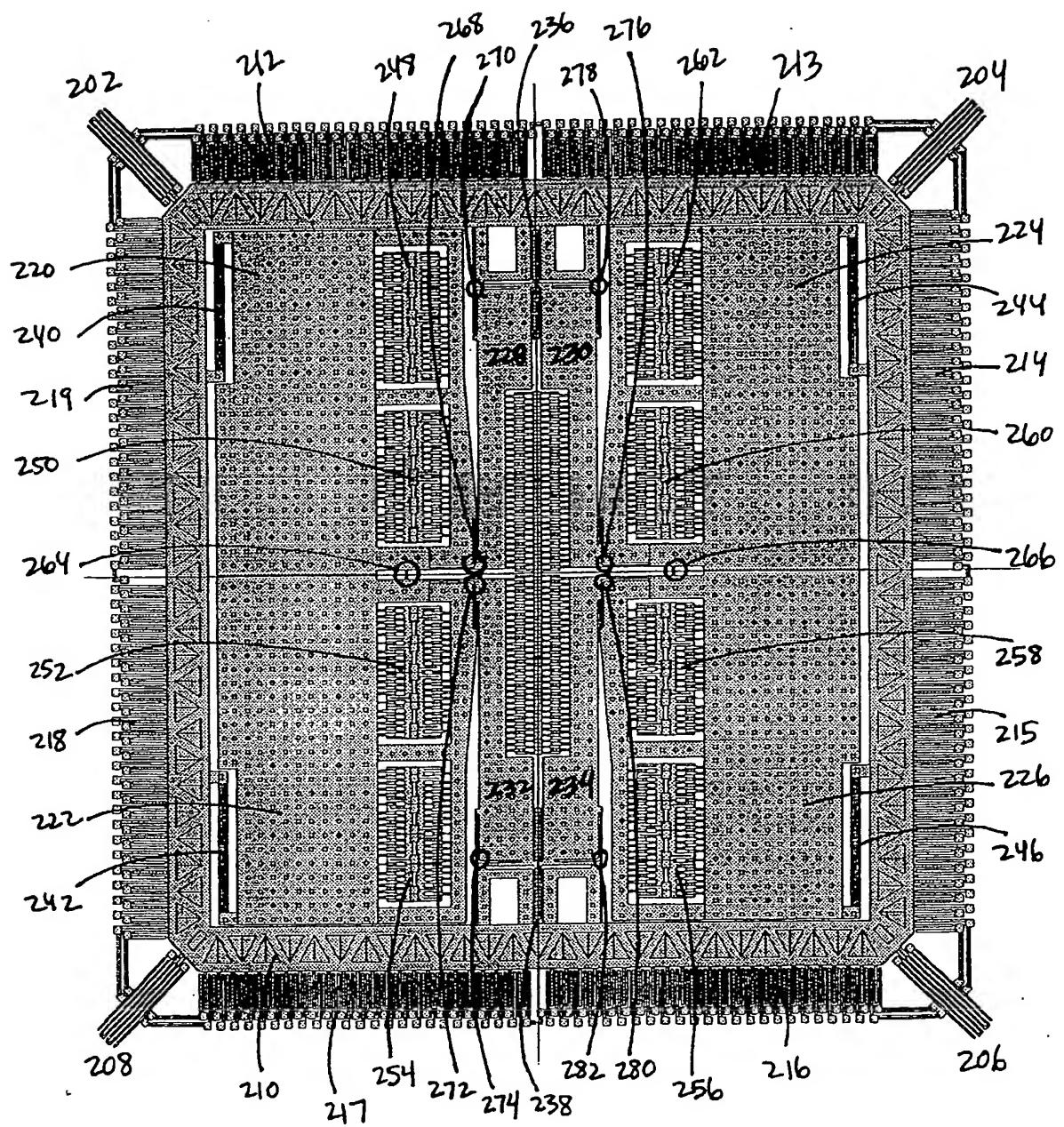


FIG. 2

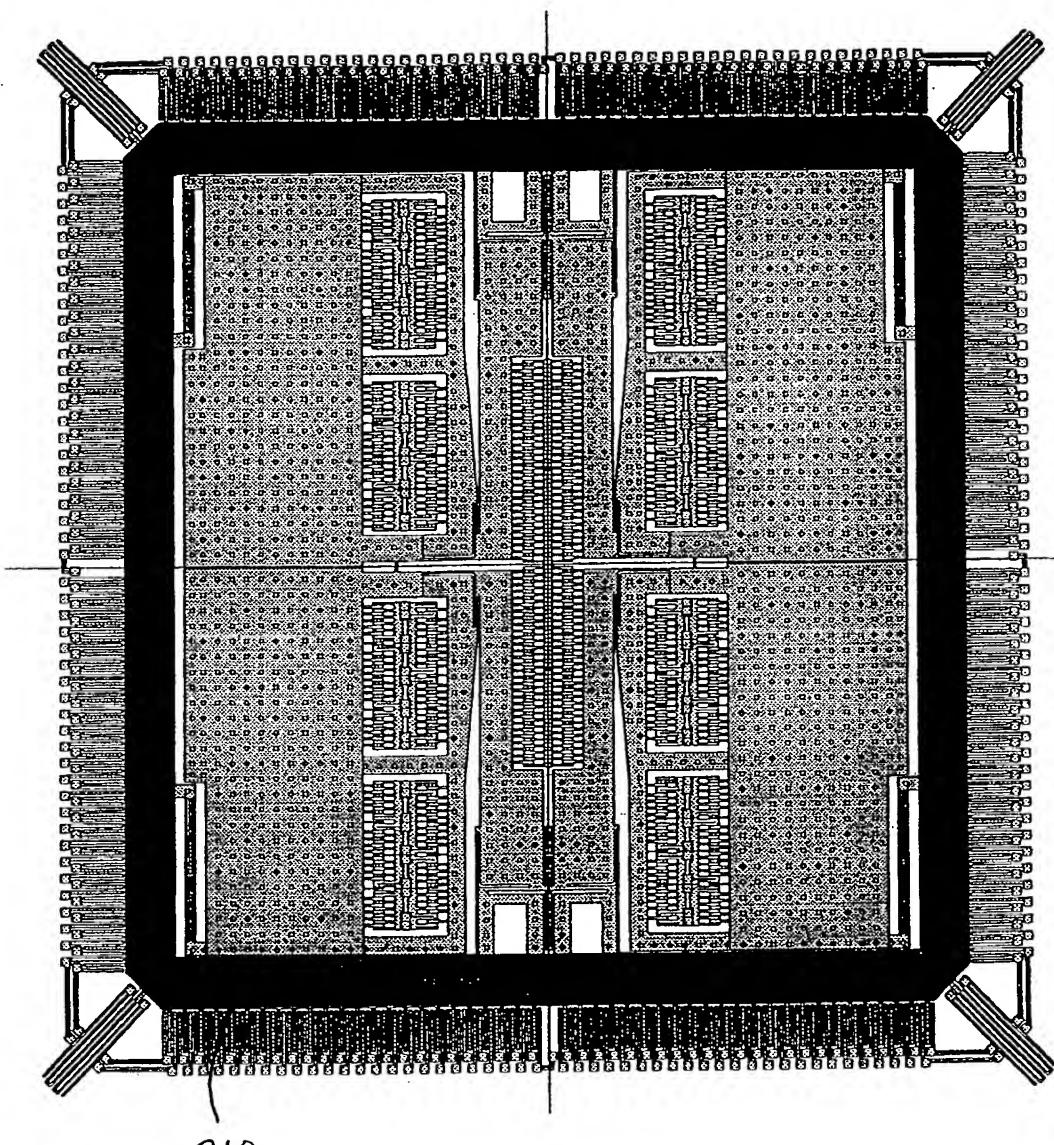


FIG. 3

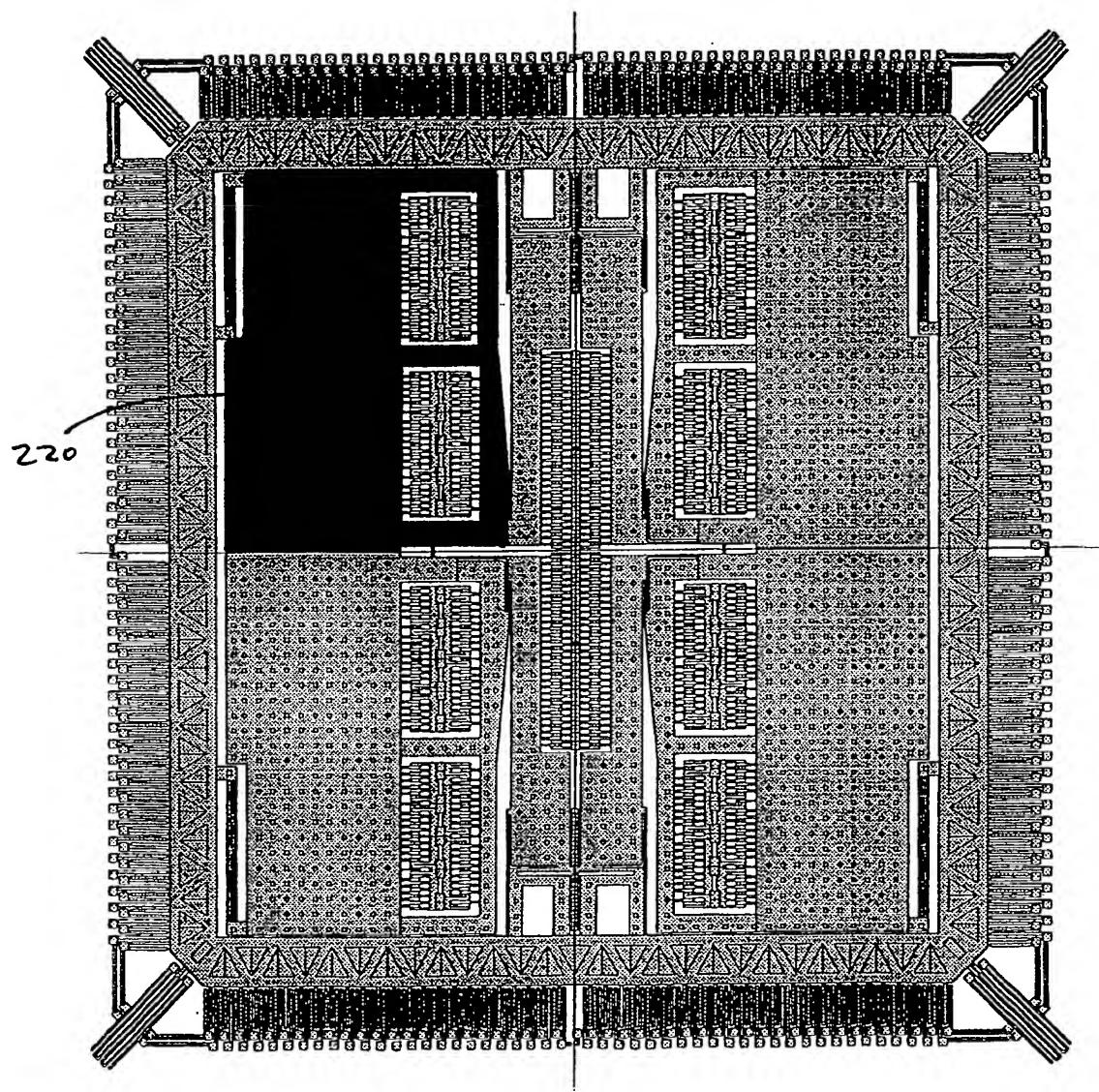


FIG. 4

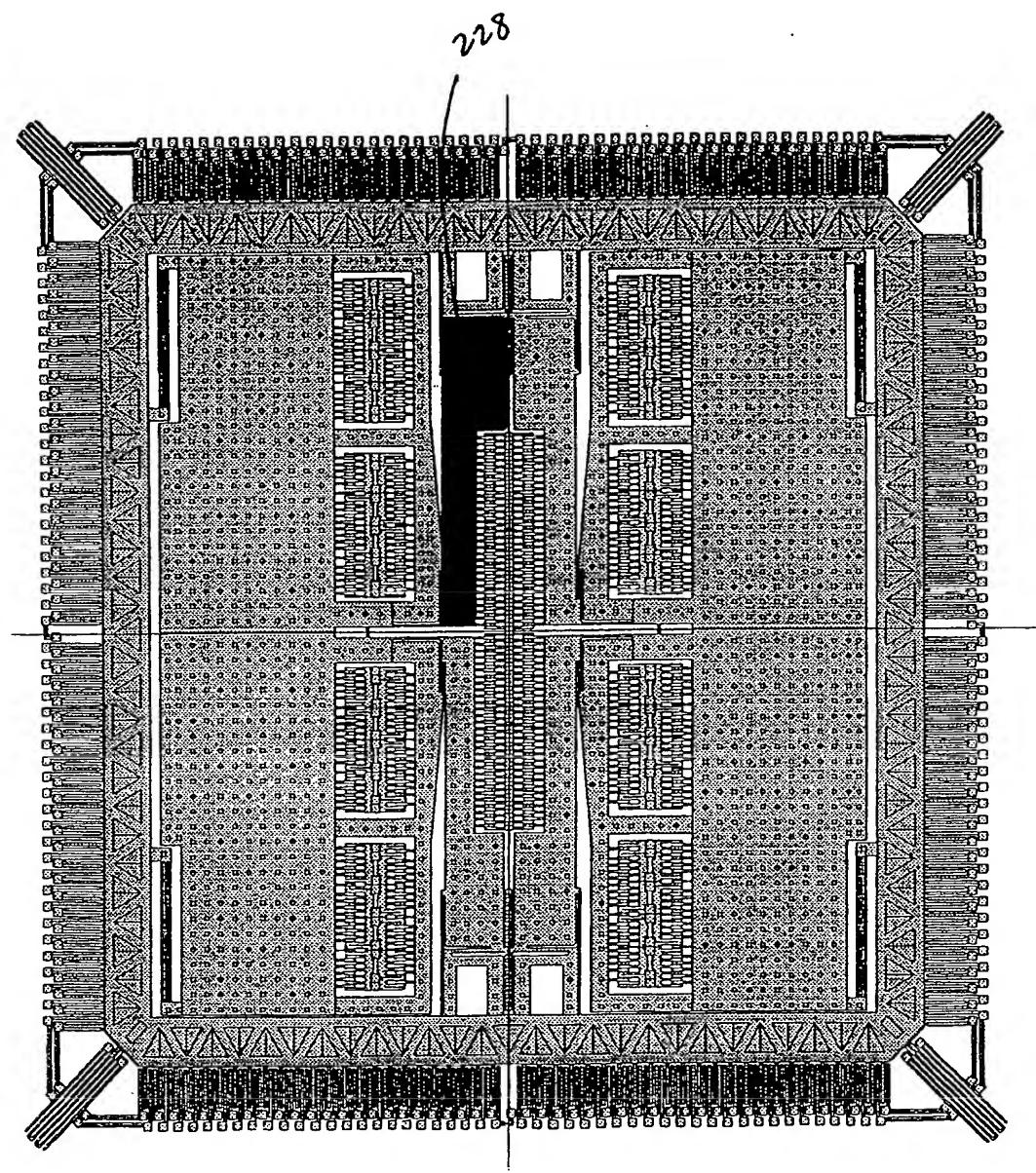


FIG. 5

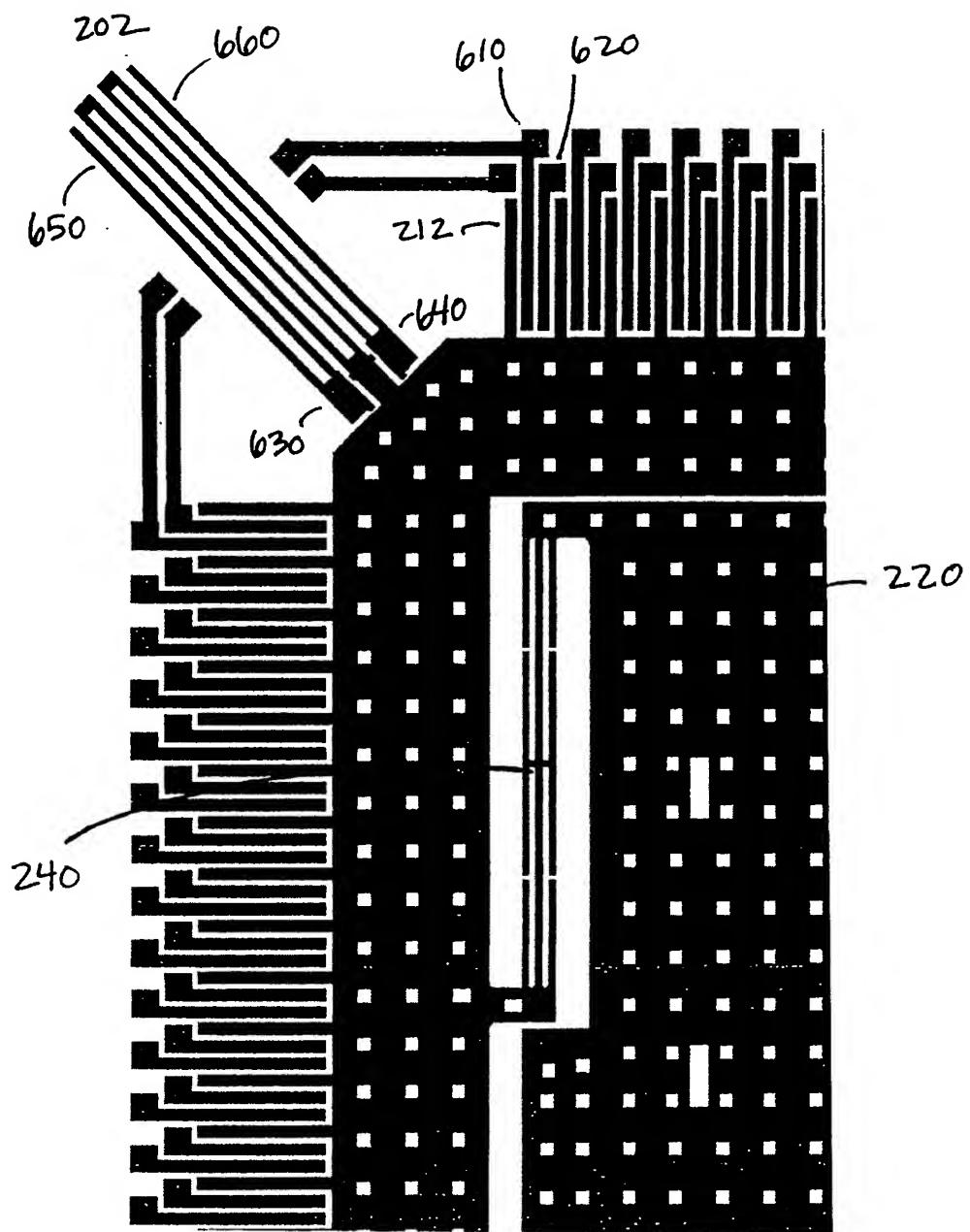


FIG. 6

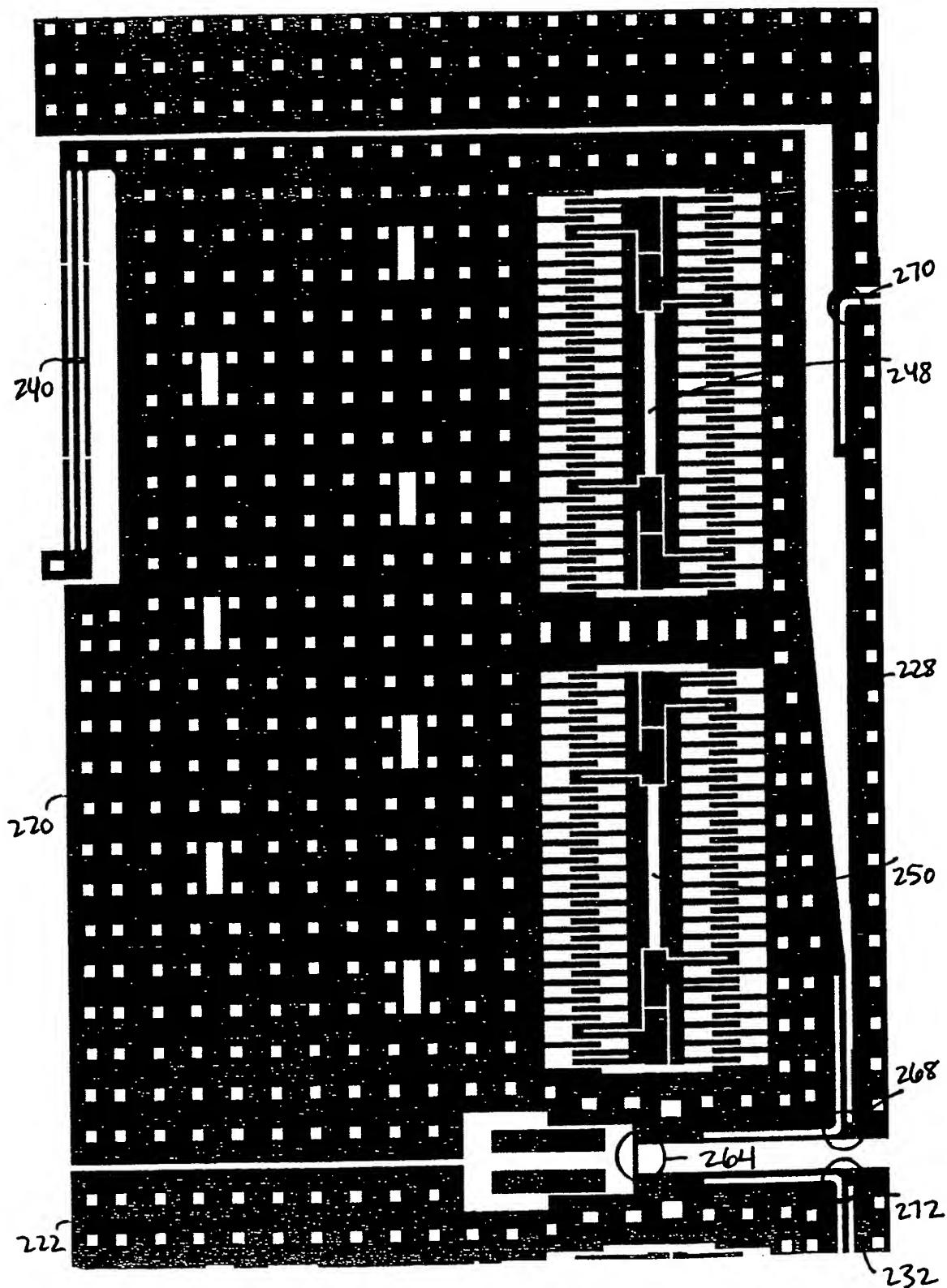


FIG. 7

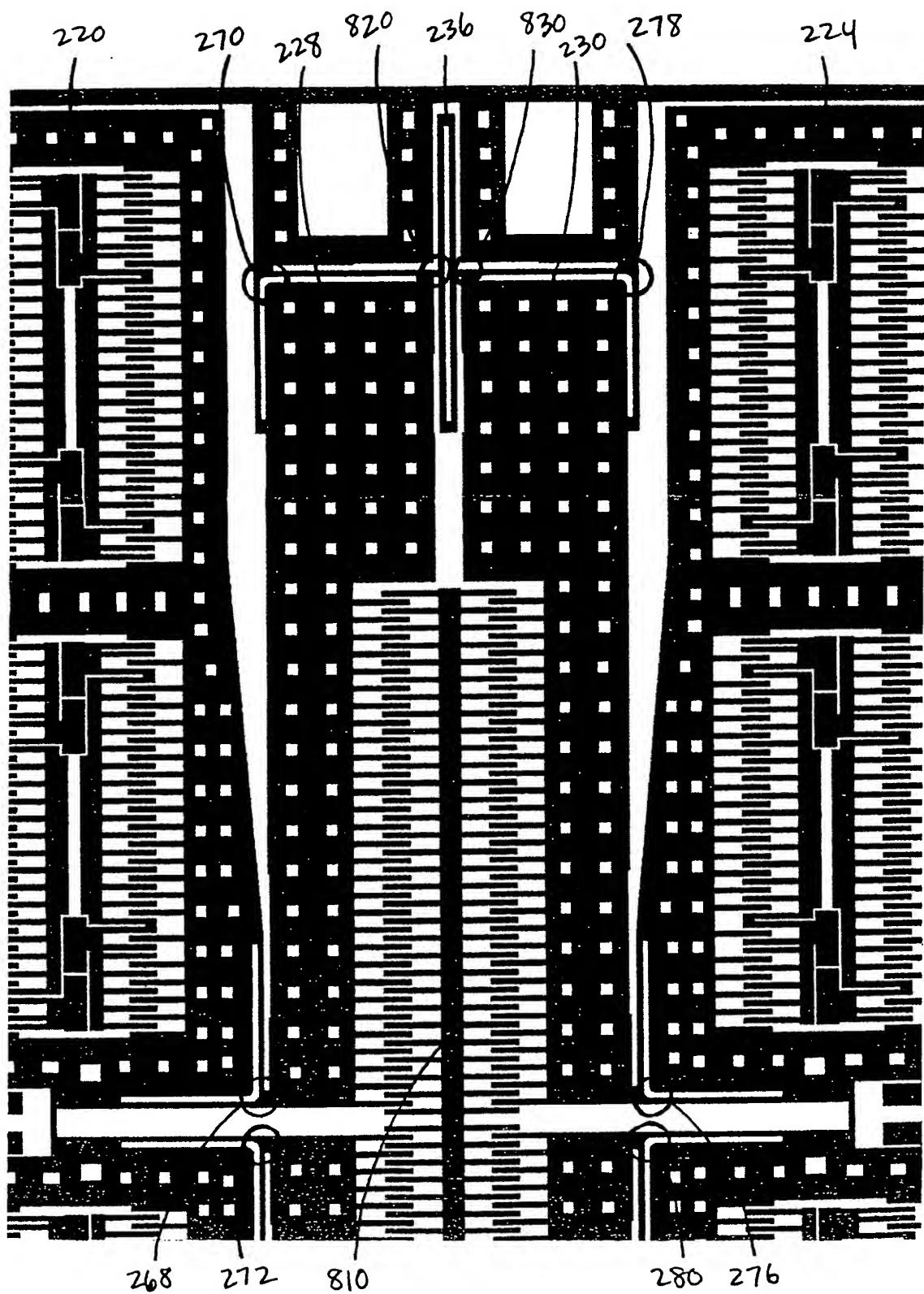


FIG. 8

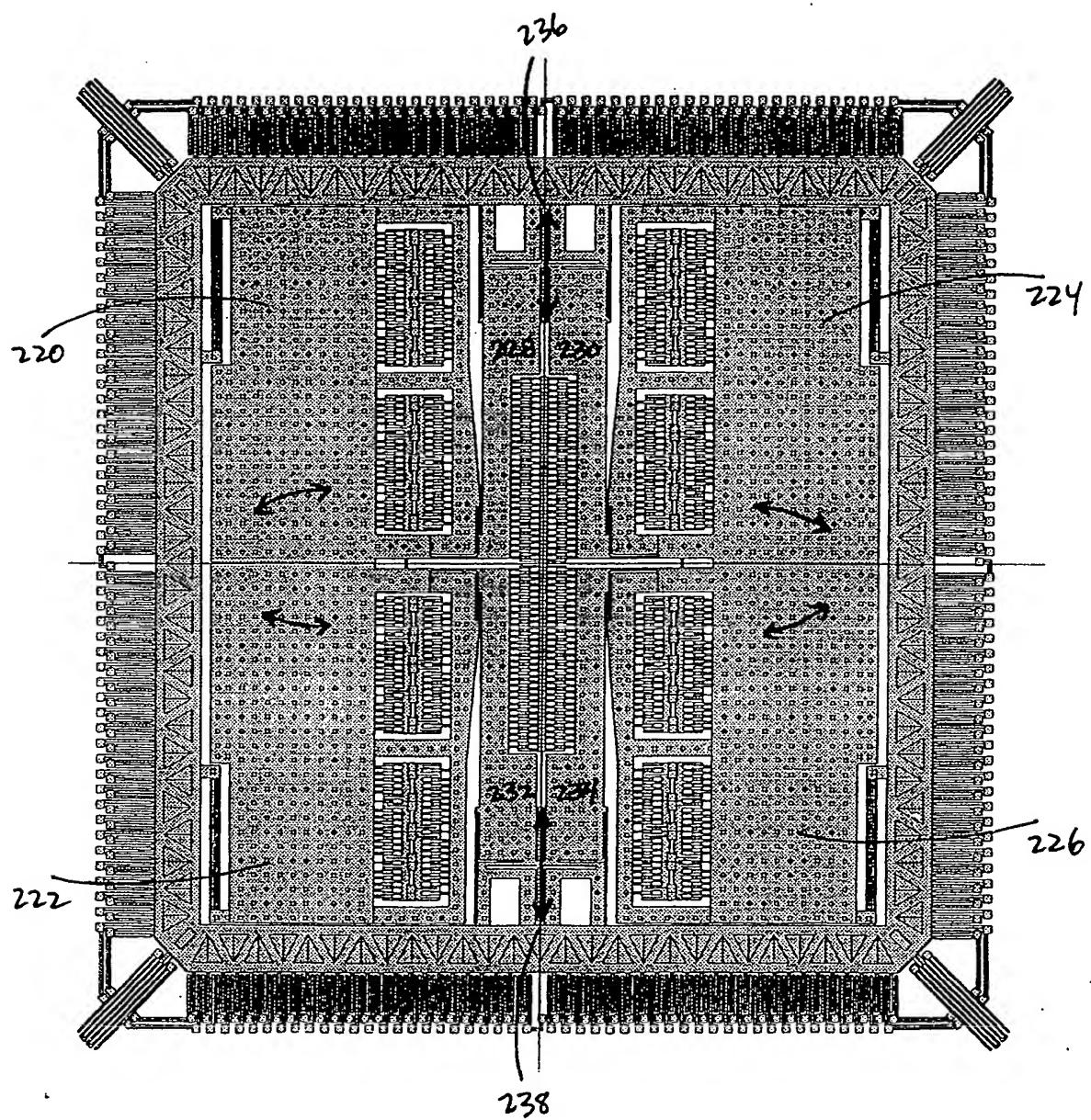


FIG. 9

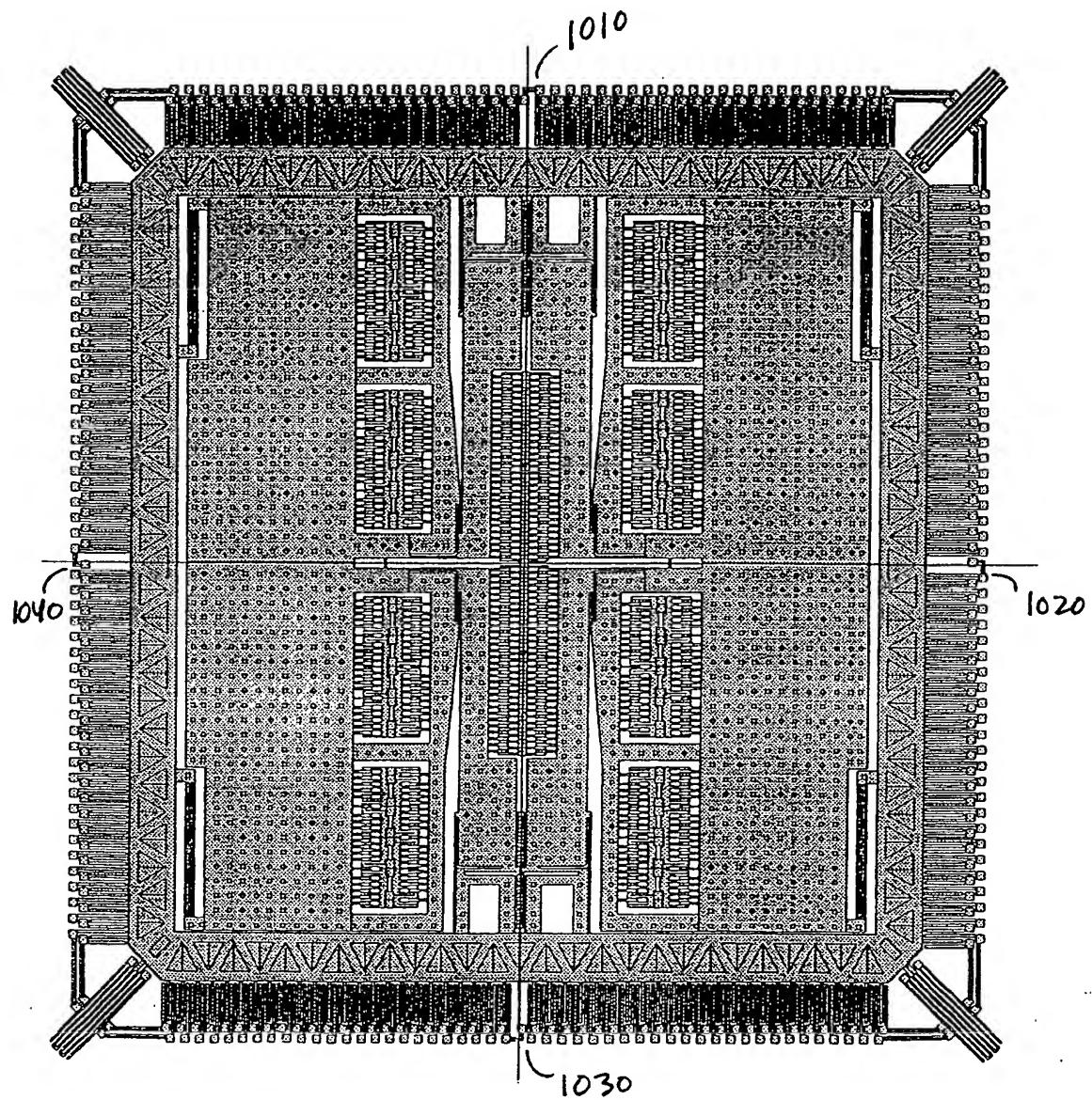


FIG. 10

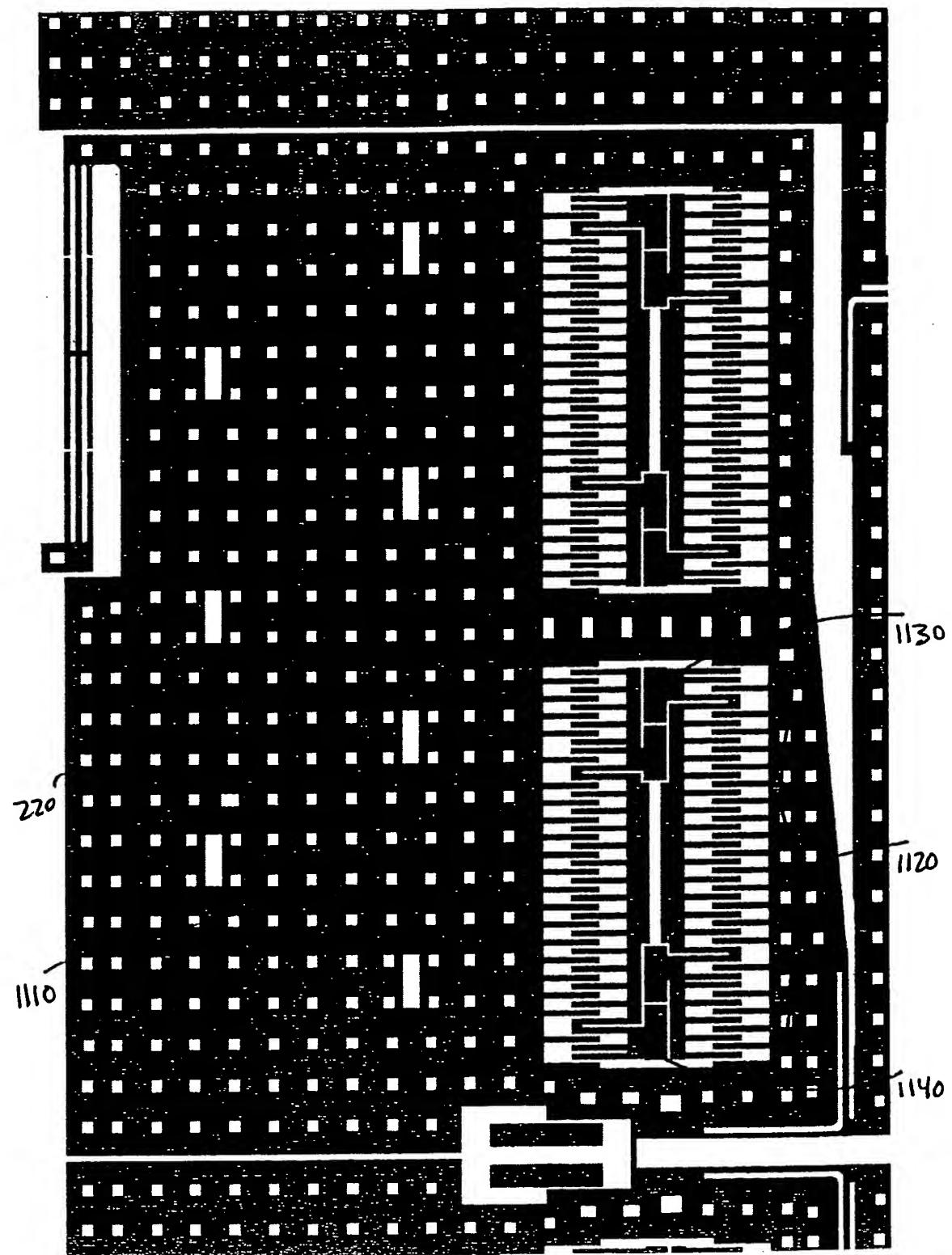


FIG. 11 250

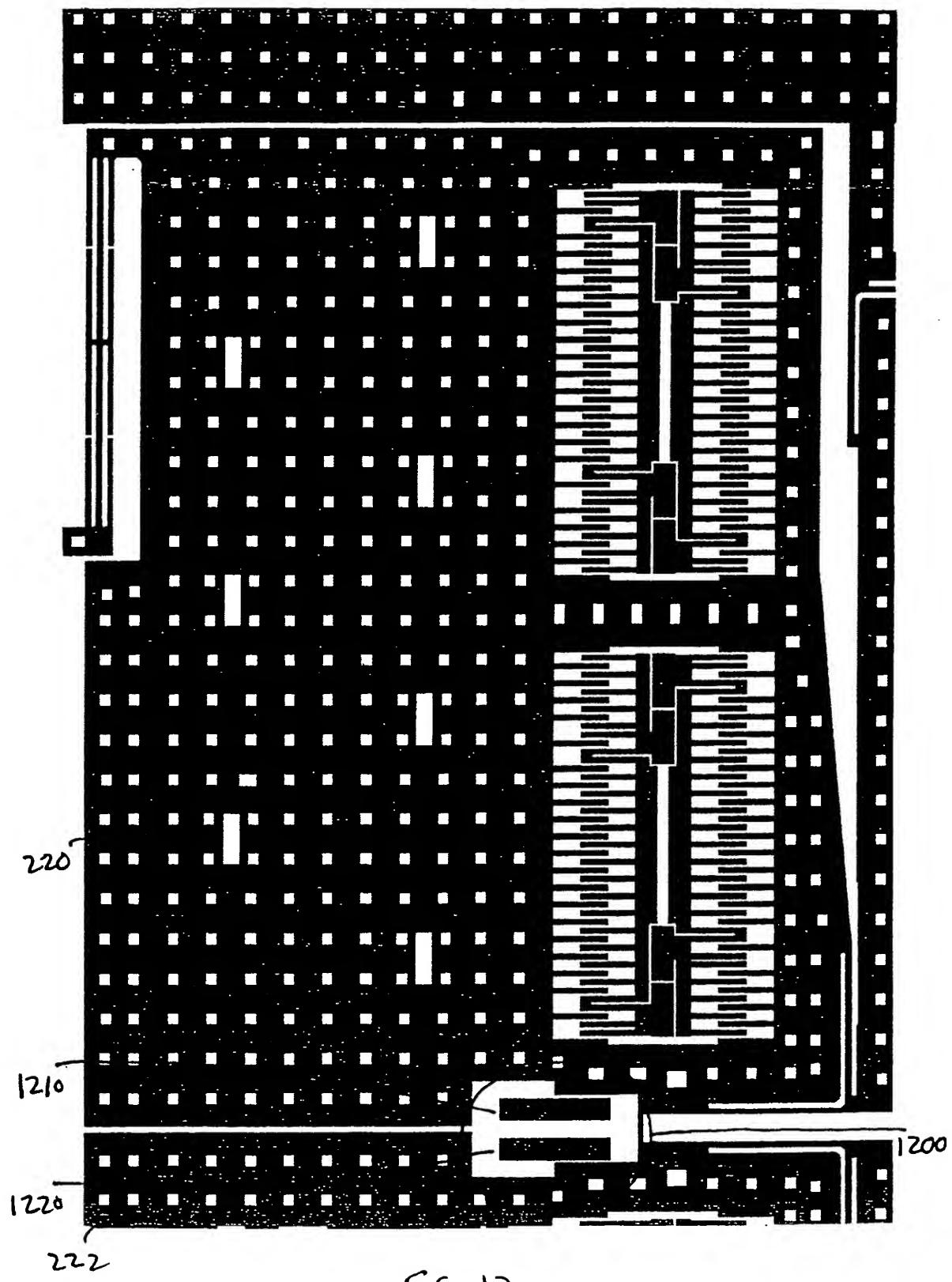


FIG. 12

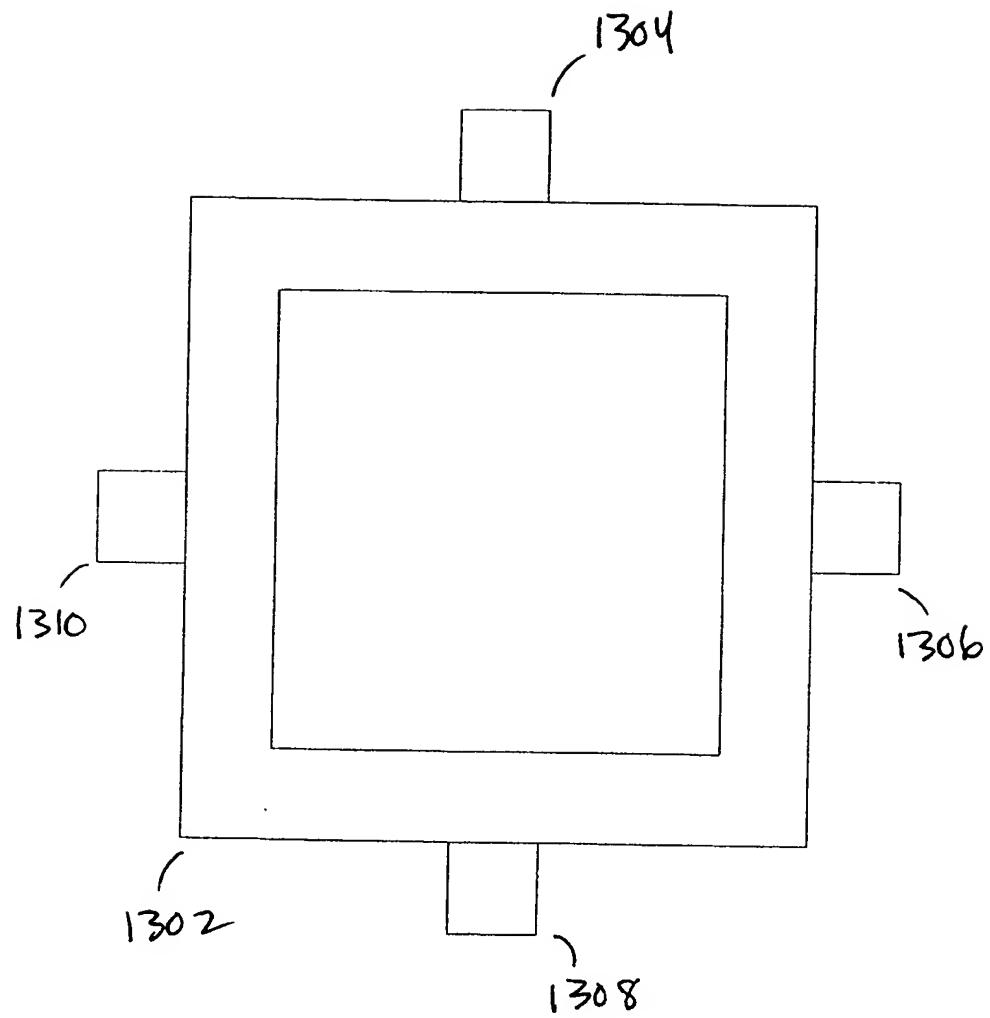


FIG. 13

VELOCITY 2nd HARMONIC DISTORTION

$$cf := clp - \frac{m}{2} - \frac{3gg}{2}$$

center line of velocity fingers to coupling lever pivot

$$\frac{cf}{um} = 48.3$$

$$Nv := 0, 1, \dots, \frac{v}{8} - 1$$

$$s(Nv) := \frac{cf}{|cl| - Nv(wf(0) + gv(0))} \frac{gg}{2um}$$

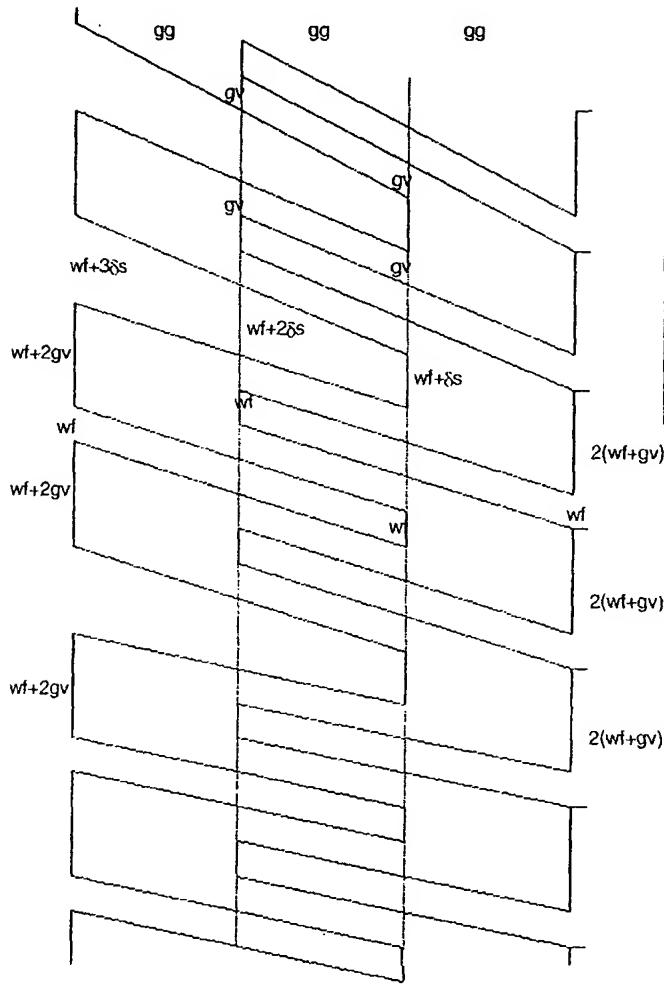
$$s(Nv) =$$

1.7
1.7
1.8
1.8
1.8
1.9
1.9
2
2
2.1
2.1
2.2
2.3
2.4
2.4
2.5

gv > gd to allow perpendicular spacing within gd limit.

s is Y coordinate shift of finger for X of gg rounded to 0.1um. This allows the vertices of all fingers on grid.

fingers have uniform pitch on the coupling lever and uniform separation on the fixed bus.



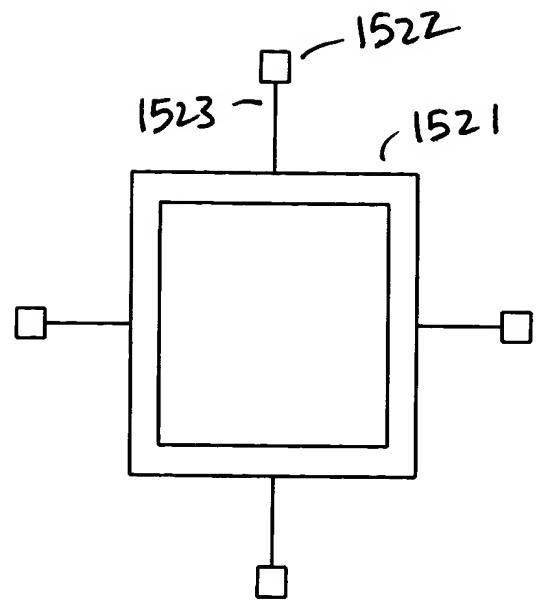
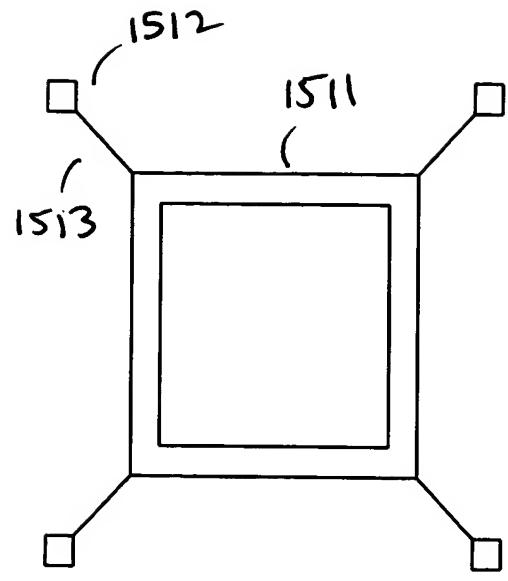
$$td(Nv) := (s(Nv) - \text{round}(s(Nv), 1)) \frac{(|cl| - Nv(wf(0) + gv(0))) 2}{cf}$$

tangential displacement error, um, or effective value...

$$tdc := \sqrt{\sum_{Nv=0}^{\frac{v}{8}-1} \frac{8td(Nv)^2}{v}}$$

$$tdc = 0.12$$

FIG. 14



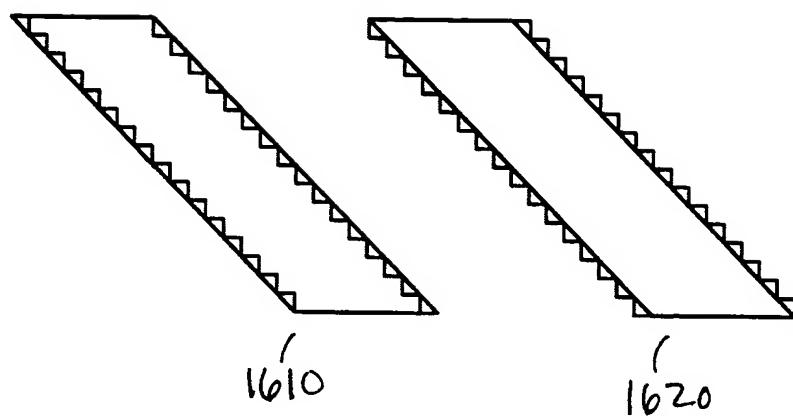


FIG. 16

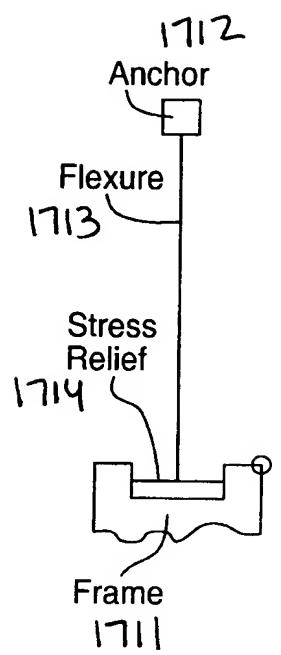


FIG. 17A

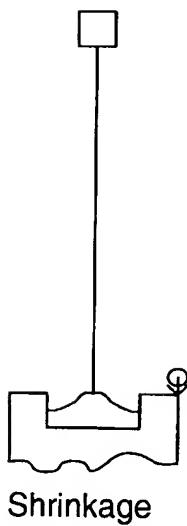


FIG. 17B



FIG. 17C

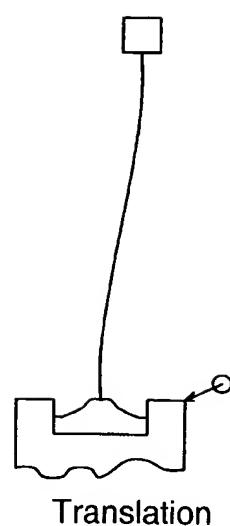


FIG. 17D

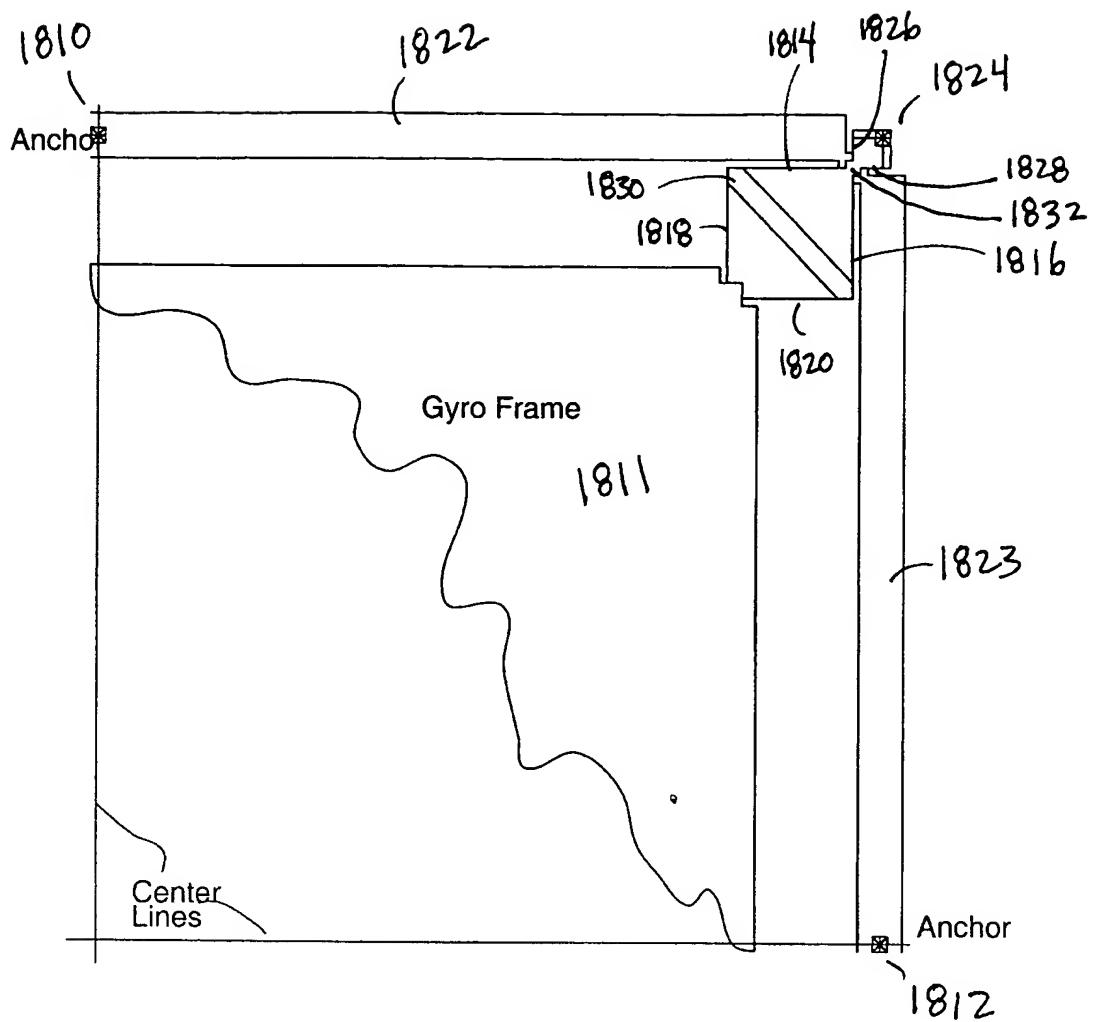


FIG. 18 1800

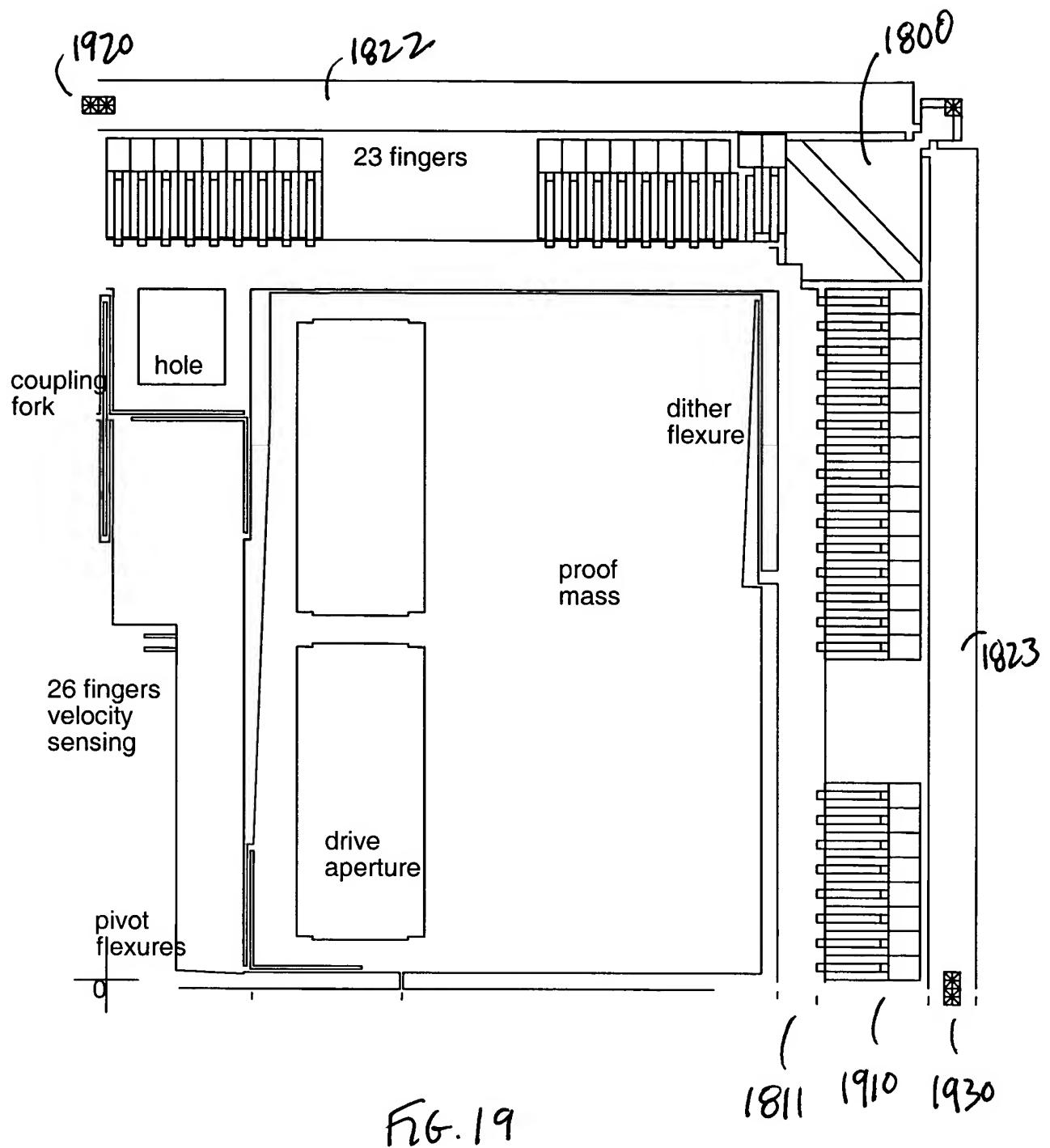
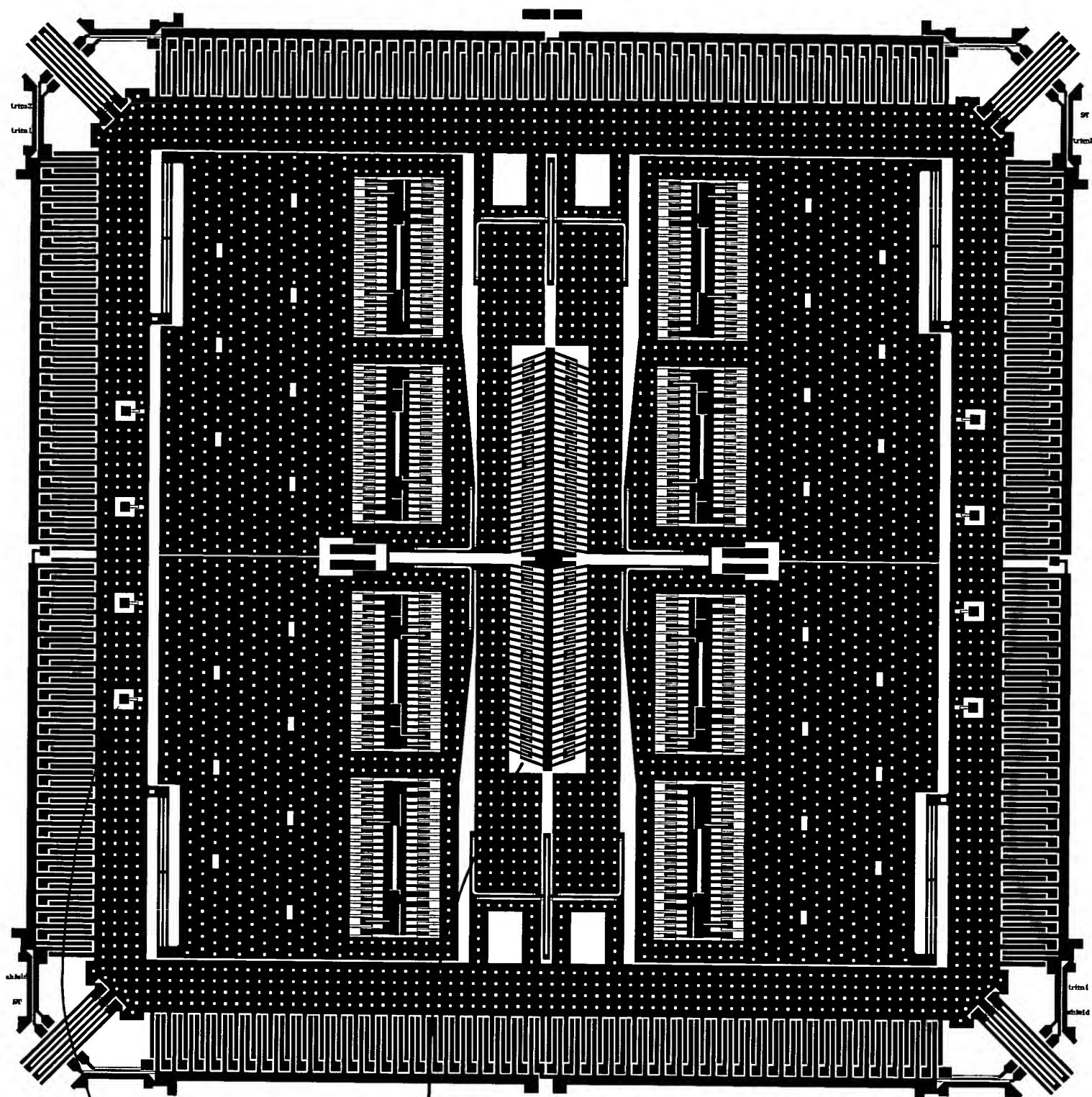


Fig. 19



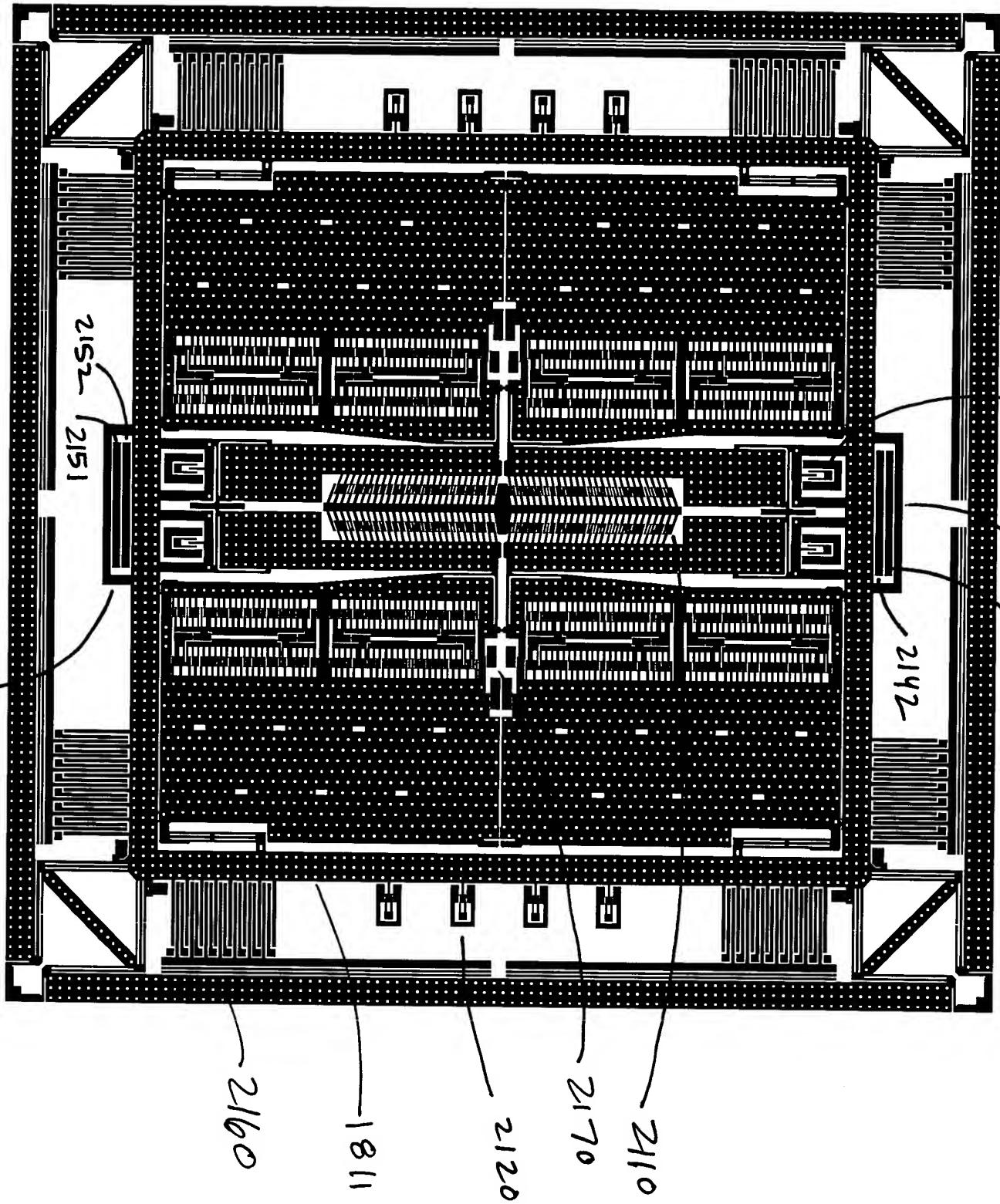
2020

2010

fig. 20

FIG. 21

2150



2130

2140
2141

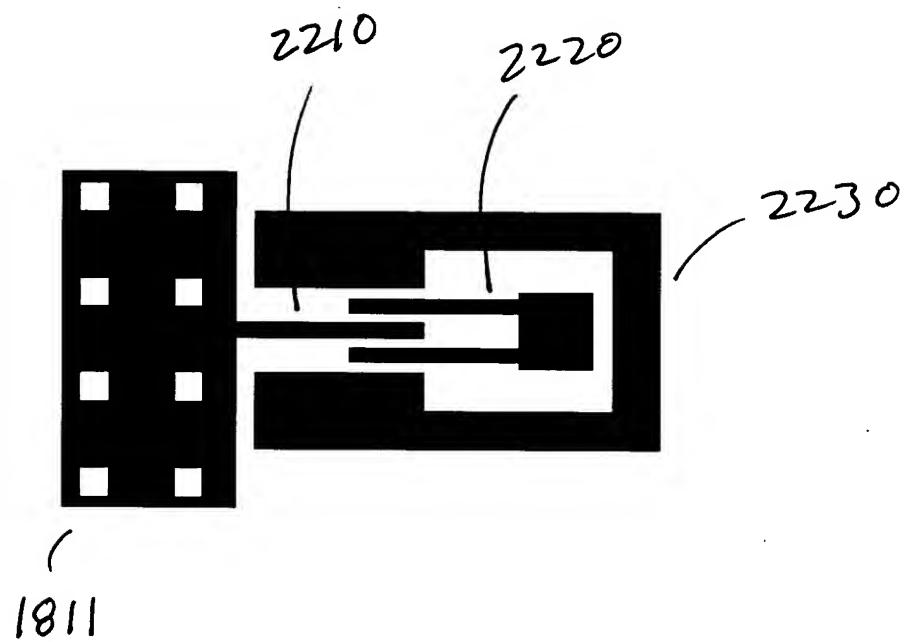


FIG. 22